

What is claimed is:

1. A method for formulating a protein comprising:
combining a protein mixture with a cross-linking reagent;
placing the protein mixture into a mold after combining the protein mixture with a cross-linking reagent;
hardening the protein mixture; and
removing the hardened protein mixture from the mold.
2. A method for formulating a protein according to claim 1, wherein hardening the protein mixture comprises exposing the protein mixture to a non-liquid cross-linking process.
3. A method for formulating a protein according to claim 2, wherein hardening the protein mixture further comprises incubating the protein mixture prior to exposing the protein mixture to the non-liquid cross-linking process.
4. A method for formulating a protein according to claim 2, wherein hardening the protein mixture further comprises immersing the protein mixture in a cross-linking solution after exposing the protein solution to the non-liquid cross-linking process.
5. A method for formulating a protein according to claim 2, wherein exposing the protein mixture to a non-liquid cross-linking process comprises exposing the protein mixture to a vapor phase that is approximately 12.5% (w/w) glutaraldehyde for approximately 16 hours.

6. A method for formulating a protein according to claim 3, wherein incubating the protein mixture comprises maintaining the protein mixture at approximately room temperature for approximately two hours.

7. A method for formulating a protein according to claim 4, wherein immersing the protein mixture in a cross-linking solution comprises submerging the protein mixture in a buffered solution that is approximately 2.5% (w/w) glutaraldehyde for approximately one hour.

8. A method for formulating a protein according to claim 1, wherein the protein mixture comprises glucose oxidase and human serum albumin.

9. A method for formulating a protein according to claim 1, wherein the cross-linking reagent is glutaraldehyde.

10. A method for formulating a protein according to claim 8, wherein the cross-linking reagent is glutaraldehyde.

11. A method for formulating a protein according to claim 1, wherein the cross-linking reagent is selected from a group consisting of glutaraldehyde, disuccinimidyl suberate (DSS), and 1-Ethyl-3 (3-Dimethylaminopropyl) Carbodiimide (EDC).

12. A method for formulating a protein according to claim 8, wherein the glucose oxidase has a concentration that is between approximately 67,000 U/ml and 150,000 U/ml.

13. A method for formulating a protein according to claim 9, wherein the human serum albumin has a concentration that is between approximately 23% (w/v) and 32.5% (w/v).

14. A method for formulating a protein according to claim 12, wherein the human serum albumin has a concentration that is between approximately 23% (w/v) and 32.5% (w/v).

15. A method for formulating a protein according to claim 1, wherein the mold is configured to form the protein mixture into at least one elongated rope-like structure.

16. A method for formulating a protein according to claim 15, wherein the method further comprises cutting the at least one elongated rope-like structure into pieces.

17. A method for formulating a protein according to claim 15, wherein the elongated rope-like structure is semi-cylindrical.

18. A method for formulating a protein according to claim 1, wherein the mold comprises:
a block with a surface wherein the surface has at least one recess in it; and
wherein the protein mixture is placed in the recess when it is placed into the mold.

19. A method for formulating a protein according to claim 18, wherein the recess comprises at least one channel.

20. A method for formulating a protein according to claim 19, wherein the recess is semi-cylindrical.

21. A method for formulating a protein according to claim 19, wherein the recess comprises multiple intersecting channels.

22. A method for formulating a protein according to claim 1, wherein the method further comprises adding silicone to the protein mixture.

23. A method for formulating a protein according to claim 22, wherein adding silicone to the protein solution comprises:

obtaining silicone particles; and

adding the silicone particles to the protein mixture.

24. A method for formulating a protein according to claim 23, wherein the volume of the silicone particles is less than 20% of the volume of the protein mixture.

25. A method for formulating a protein according to claim 23, wherein mixing the silicone particles into the protein mixture occurs prior to the protein mixture being placed into the mold.

26. A method for formulating a protein according to claim 1, wherein the method further comprises washing the protein mixture after the completion of hardening the protein mixture.

27. A method for formulating a protein according to claim 1, wherein the method further comprises cutting the protein mixture into at least two pieces after removing the protein mixture from the mold.

28. A sensor comprising:
a sensor body; and

an active protein disposed within the sensor body, the active protein comprising
glucose oxidase, human serum albumin, and a cross-linking reagent.

29. A sensor according to claim 28, wherein the active protein is hardened before it is
disposed within the sensor body.

30. A sensor according to claim 28, wherein the cross-linking reagent is selected from
a group consisting of glutaraldehyde, disuccinimidyl suberate (DSS), and 1-Ethyl-3 (3-
Dimethylaminopropyl) Carbodiimide (EDC).

31. A protein matrix formed according to the method of claim 1.